



California Sportfishing Protection Alliance

"An Advocate for Fisheries, Habitat and Water Quality"

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9 February 2007

Dr. Karl Longley, Chairman
Ms. Pamela Creedon, Executive Officer
Mr. Kenneth Landau, Assistant Executive Officer
Mr. Dave Carlson, Env. Program Manager, NPDES
Mr. James Marshall, Sr. WRCE
Regional Water Quality Control Board
Central Valley Region
11020 Sun Center Drive, Suite 200
Rancho Cordova, CA 95670-6144

VIA: Electronic Submission
Hardcopy if Requested

RE: Tentative Waste Discharge Requirements (NPDES No. CA0083681) and Time Schedule Order for County of Sacramento Public Works Agency, Kiefer Landfill Groundwater Extraction and Treatment Plant, Sacramento County

Dear Messrs. Longley, Landau, Carlson, Marshall and Ms. Creedon:

The California Sportfishing Protection Alliance, Watershed Enforcers and San Joaquin Audubon (CSPA) has reviewed the Central Valley Regional Water Quality Control Board's (Regional Board) tentative NPDES permit (Order or Permit) and Time Schedule Order for the Kiefer Landfill Groundwater Extraction and Treatment Plant (Discharger) and has the following comments.

CSPA requests designated party for this proceeding. CSPA is a 501(c)(3) conservation and research organization established in 1983 for the purpose of conserving, restoring, and enhancing the state's fishery resources and their aquatic ecosystems and associated riparian habitats. CSPA has actively promoted the protection of water quality and fisheries throughout California before state and federal agencies, the State Legislature and Congress and regularly participates in administrative and judicial proceedings on behalf of its members to protect, enhance, and restore water quality and aquatic resources. CSPA members reside, boat, fish and recreate in and along waterways throughout the Central Valley including Sacramento County.

- 1. The proposed Permit is based on an incomplete Report of Waste Discharge (RWD) and in accordance with Federal Regulations 40 CFR 122.21(e) and (h) and 124.3 (a)(2) the State's *Policy for Implementation of Toxics standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP) and California Water Code Section 13377 the permit should not be issued until the discharge is fully characterized and a protective permit can be written.**

There is no information in the proposed Permit to indicate that the wastewater discharge has been characterized for California Toxics Rule (CTR), National Toxics Rule (NTR), drinking water MCLs and other pollutants which could degrade the beneficial uses of the receiving stream and exceed water quality standards and objectives. The Reasonable Potential Analysis Summary, Attachment G, does not contain a complete list of CTR, NTR, drinking water MCLs and other pollutants that would indicate that the Regional Board is basing the proposed Permit on adequate information. For the last several years the Regional Board's NPDES permits have contained a spreadsheet detailing the priority pollutant sampling which has, or has not, been monitored. Absent this spreadsheet, one can only conclude that the required priority pollutant sampling, which is necessary to characterize the discharge, has not been conducted. According to precedential Water Quality Order WQO 2004-0013 for the City of Yuba City, "The findings or Fact Sheet should cite the specific data on which it relied in its calculations." The SIP required the Regional Board's to require dischargers to characterize their discharges for priority pollutants. On 10 September 2001, the Regional Board mailed out a California Water Code Section 13267 letter to dischargers requiring a minimum of quarterly sampling for priority pollutants, pesticides, drinking water constituents, and other pollutants. There is no indication that this data was ever received or that it was utilized in preparing the proposed permit.

There are also several instances where the proposed Permit is based on an incomplete record of the discharge quality. Specifically, for the removal of limitations for several previously limited pollutants (antibacksliding discussion) and to justify the reduction of toxicity monitoring. Each of these instances utilizes only data from February 2002 through August 2005. There is a disturbing absence of data from 2001, half of 2005 and all of 2006. The absence of data is contrary to the SIP, Section 1.2, requirement that the Regional Board use all valid, relevant and representative data. There does not appear to have been any changes in the treatment processes or the quality of the influent which would invalidate this data.

Federal Regulation, 40 CFR 122.21(e) states in part that: "The Director shall not issue a permit before receiving a complete application for a permit except for NPDES general permits. In accordance with 40 CFR 122.21 (e) and (h) and 124.3 (a)(2) the Regional Board shall not adopt the proposed permit without first a complete application, in this case for industrial landfill, for which the permit application requirements are extensive. An application for a permit is complete when the Director receives an application form and any supplemental information which are completed to his or her satisfaction. The completeness of any application for a permit shall be judged independently of the status of any other permit application or permit for the same facility or activity."

State Report of Waste Discharge form 200 is required as a part of a complete Report of Waste Discharge. Form 200, part VI states that: "To be approved, your application must include a complete characterization of the discharge." The Federal Report of Waste Discharge forms also require a significant characterization of a

wastewater discharge. Federal Application Form 2A, which is required for completion of a Report of Waste Discharge for municipalities, Section B.6, requires that Dischargers whose flow is greater than 0.1 mgd, must submit sampling data for ammonia, chlorine residual, dissolved oxygen, total kjeldahl nitrogen, nitrate plus nitrite nitrogen, oil and grease, phosphorus and TDS. Federal Application Form 2A, Section D, requires that Discharger's whose flow is greater than 1.0 mgd, conduct priority pollutant sampling. Federal Regulation, 40 CFR 122.21(g)(7) requires for existing manufacturing, commercial or mining facilities that a significant list of priority pollutants be sampled to characterize the effluent discharge. This has apparently not been completed.

As the proposed Permit states; the California Toxics Rule (CTR)(40 CFR 131, Water Quality Standards) contains water quality standards applicable to this wastewater discharge. The final due date for compliance with CTR water quality standards for all wastewater dischargers in California is May 2010. The State's *Policy for Implementation of Toxics standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (SIP), Section 1.2, requires wastewater dischargers to provide all data and other information requested by the Regional Board before the issuance, reissuance, or modification of a permit to the extent feasible.

Federal Regulation, 40 CFR 122.21(e) states in part that: "The Director shall not issue a permit before receiving a complete application for a permit except for NPDES general permits.

California Water Code, section 13377, requires that: "Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance." The application for permit renewal is incomplete and in accordance with the CWC the proposed Permit should not be adopted.

2. The proposed Permit does not comply with the Board's Antidegradation Policy by failing to require an assessment of groundwater quality.

The Discharger has polluted groundwater by operations at the Kiefer Landfill. The proposed NPDES Permit is for the disposal of extracted and treated groundwater. Finding IIB states that: "During groundwater treatment system maintenance operations, the treated groundwater is discharged at Discharge Point 002 to an on-site sedimentation basin where it either evaporates to the air or percolates to the ground". Finding IIB is incorrect in that during maintenance operations the groundwater is not treated. If the extracted polluted groundwater were actually treated, there would be no reason to divert the flow to the sedimentation basin during maintenance operations. The polluted untreated extracted groundwater is allowed to percolate back to groundwater. This discharge of untreated waste poses a threat to groundwater quality which is not addressed

by the proposed Permit. The untreated groundwater is not characterized in the proposed Permit; however it obviously contains numerous metals, organochlorine pesticides and volatile organic compounds at levels that pose a threat to water quality. The proposed Permit only contains limitations for TDS and total chlorine residual for the discharge to the sedimentation basin (Land Discharge Specification No. 5). The Groundwater Limitations are said to be “Not Applicable”. Furthermore, the proposed Permit does not include groundwater monitoring to assess the threat to groundwater quality. Clearly, the discharge of untreated polluted groundwater to a percolation pond poses a threat to groundwater quality that needs to be prohibited and at a minimum monitored. It is doubtful that the percolation to groundwater can be found to be BPTC or in the interest of the State of California; since the simple act of turning off the groundwater extraction system would prevent the need for the percolation ponds.

California Water Code, section 13377, requires that: “Notwithstanding any other provision of this division, the state board and the regional boards shall, as required or authorized by the Federal Water Pollution Control Act, as amended, issue waste discharge and dredged or fill material permits which apply and ensure compliance with all applicable provisions of the act and acts amendatory thereof or supplementary, thereto, together with any more stringent effluent standards or limitations necessary to implement water quality control plans, or for the protection of beneficial uses, or to prevent nuisance.” The beneficial uses of groundwater are not protected by allowing wastes to percolate.

California’s antidegradation policy is composed the State Board’s Resolution 68-16 which is included as a part of the Basin Plan. As part of the state policy for water quality control, the antidegradation policy is binding on all of the Regional Boards. Implementation of the state’s antidegradation policy is guided by the State Antidegradation Guidance, SWRCB Administrative Procedures Update 90-004, 2 July 1990 (“APU 90-004”) and Water Quality Order 86-17.

The Regional Board must apply the antidegradation policy whenever it takes an action that will lower water quality. (State Antidegradation Guidance, pp. 3, 5, 18) Application of the policy does not depend on whether the action will actually impair beneficial uses. (State Antidegradation Guidance, p. 6. Actions that trigger use of the antidegradation policy include issuance, re-issuance, and modification of NPDES and Section 404 permits and waste discharge requirements, waiver of waste discharge requirements, issuance of variances, relocation of discharges, issuance of cleanup and abatement orders, increases in discharges due to industrial production and/or municipal growth and/or other sources, exceptions from otherwise applicable water quality objectives, etc. (State Antidegradation Guidance, pp. 7-10) The State Board’s APU 90-004 specifies guidance to the Regional Boards for implementing the state antidegradation policy and guidance.

Even a minimal antidegradation analysis would require an examination of: 1) existing applicable water quality standards; 2) existing conditions in groundwater waters compared to standards; 3) treatability; 4) best practicable treatment and control (BPTC);

5) an assessment of the significance of changes in ambient groundwater quality. A minimal antidegradation analysis must also analyze whether: 1) such degradation is consistent with the maximum benefit to the people of the state; 2) the activity is necessary to accommodate important economic or social development in the area; 3) the highest statutory and regulatory requirements and best management practices for pollution control are achieved; and 4) resulting water quality is adequate to protect and maintain existing beneficial uses. It is doubtful that the percolation to groundwater can be found to be BPTC or in the interest of the State of California; since the simple act of turning off the groundwater extraction system would prevent the need for the percolation ponds.

The proposed action is renewal of an NPDES permit. Although the applicable provisions being discussed for land disposal are not federally mandated, an antidegradation analysis is required. Any antidegradation analysis must comport with implementation requirements in State Board Water Quality Order 86-17 and State Antidegradation Guidance. The discharge of wastewater to unlined ponds at a minimum threatens groundwater quality, mandating monitoring of groundwater quality to determine if degradation has occurred and to what degree. Groundwater monitoring must be required to determine if the wastewater discharge is degrading groundwater quality and commingling and degrading surface water. Again, it is doubtful that the percolation to groundwater can be found to be BPTC or in the interest of the State of California; since the simple act of turning off the groundwater extraction system during maintenance activities would prevent the need for the percolation ponds.

3. The proposed Permit Effluent Limitations are not limited for mass contrary to Federal Regulations and advise from U.S.EPA.

Section 5.7.1 of U.S. EPA's *Technical Support Document for Water Quality Based Toxics Control* (TSD, EPA/505/2-90-001) states with regard to mass-based Effluent Limits: "Mass-based effluent limits are required by NPDES regulations at 40 CFR 122.45(f). The regulation requires that all pollutants limited in NPDES permits have limits, standards, or prohibitions expressed in terms of mass with three exceptions, including one for pollutants that cannot be expressed appropriately by mass. Examples of such pollutants are pH, temperature, radiation, and whole effluent toxicity. Mass limitations in terms of pounds per day or kilograms per day can be calculated for all chemical-specific toxics such as chlorine or chromium. Mass-based limits should be calculated using concentration limits at critical flows. For example, a permit limit of 10 mg/l of cadmium discharged at an average rate of 1 million gallons per day also would contain a limit of 38 kilograms/day of cadmium.

Mass based limits are particularly important for control of bioconcentratable pollutants. Concentration based limits will not adequately control discharges of these pollutants if the effluent concentrations are below detection levels. For these pollutants, controlling mass loadings to the receiving water is critical for preventing adverse environmental impacts.

However, mass-based effluent limits alone may not assure attainment of water quality standards in waters with low dilution. In these waters, the quantity of effluent discharged has a strong effect on the instream dilution and therefore upon the RWC. At the extreme case of a stream that is 100 percent effluent, it is the effluent concentration rather than the mass discharge that dictates the instream concentration. Therefore, EPA recommends that permit limits on both mass and concentration be specified for effluents discharging into waters with less than 100 fold dilution to ensure attainment of water quality standards.”

Federal Regulations, 40 CFR 122.45 (f), states the following with regard to mass limitations:

“(1) all pollutants limited in permits shall have limitations, standards, or prohibitions expressed in terms of mass except:

For pH, temperature, radiation or other pollutants which cannot be expressed by mass;

When applicable standards and limitations are expressed in terms of other units of measurement; or

If in establishing permit limitations on a case-by-case basis under 125.3, limitations expressed in terms of mass are infeasible because the mass of the pollutant discharged cannot be related to a measure of operation (for example, discharges of TSS from certain mining operations), and permit conditions ensure that dilution will not be used as a substitute for treatment.

(2) Pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations.”

TMDLs represent a mass loading that may occur over a given time period to attain and maintain water quality standards. Mass loadings from discharges are critical to determining individual discharger allocations once a TMDL has been completed.

In addition to the above citations, on June 26th 2006 U.S. EPA, Mr. Douglas Eberhardt, Chief of the CWA Standards and Permits Office, sent a letter to Dave Carlson at the Central Valley Regional Water Quality Control Board strongly recommending that NPDES permit effluent limitations be expressed in terms of mass as well as concentration. The proposed Permit must be amended to include mass limitations in addition to concentration based Effluent Limitations.

- 4. The proposed Permit contains an Effluent Limitation for acute toxicity that allows mortality that exceeds the Basin Plan water quality objective and does not comply with Federal regulations, at 40 CFR 122.44 (d)(1)(i).**

Federal regulations, at 40 CFR 122.44 (d)(1)(i), require that limitations must control all pollutants or pollutant parameters which the Director determines are or may be discharged at a level which will cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The Water Quality Control Plan for the Sacramento/ San Joaquin River Basins (Basin Plan), Water Quality Objectives (Page III-8.00) for Toxicity is a narrative criteria which states that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This section of the Basin Plan further states, in part that, compliance with this objective will be determined by analysis of indicator organisms.

The Tentative Permit requires that the Discharger conduct acute toxicity tests and states that compliance with the toxicity objective will be determined by analysis of indicator organisms. However, the Tentative Permit contains a discharge limitation that allows 30% mortality (70% survival) of fish species in any given toxicity test.

For an ephemeral or low flow stream, allowing 30% mortality in acute toxicity tests allows that same level of mortality in the receiving stream, in violation of federal regulations and contributes to exceedance of the Basin Plan's narrative water quality objective for toxicity. Accordingly, the proposed Permit must be revised to prohibit acute toxicity in accordance with Federal regulations, at 40 CFR 122.44 (d)(1)(i).

The proposed Permit does not contain Effluent Limitations for chronic toxicity and therefore does not comply with Federal regulations, at 40 CFR 122.44 (d)(1)(i). Federal regulations, at 40 CFR 122.44 (d)(1)(i), require that limitations must control all pollutants or pollutant parameters which the Director determines are or may be discharged at a level which will cause, or contribute to an excursion above any State water quality standard, including state narrative criteria for water quality. The SIP, Section 4, Toxicity Control Provisions, Water Quality-Based Toxicity Control, states that: "A chronic toxicity effluent limitation is required in permits for all dischargers that will cause, have a reasonable potential to cause, or contribute to chronic toxicity in receiving waters." The Water Quality Control Plan for the Sacramento/ San Joaquin River Basins (Basin Plan), Water Quality Objectives (Page III-8.00) for Toxicity is a narrative criteria which states that all waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. The Proposed Permit states that: "...to ensure compliance with the Basin Plan's narrative toxicity objective, the discharger is required to conduct whole effluent toxicity testing...". However, sampling does not equate with or ensure compliance. The Tentative Permit requires the Discharger to conduct an investigation of the possible sources of toxicity if a threshold is exceeded. This language is not a limitation and essentially eviscerates the Regional Board's authority, and the authority granted to third parties under the Clean Water Act, to find the Discharger in violation for discharging chronically toxic constituents. An effluent limitation for chronic toxicity must be included in the Order. In addition, the Chronic Toxicity Testing Dilution Series should bracket the actual dilution at the time of discharge, not use default values that are not relevant to the discharge. Accordingly, the proposed Permit must be revised to

prohibit chronic toxicity in accordance with Federal regulations, at 40 CFR 122.44 (d)(1)(i).

5. The Deer Creek Temperature Objectives, Table 5, are not protective of the beneficial uses of cold water aquatic habitat and do not comply with Federal Regulations and the California Water Code.

The Deer Creek Temperature Objectives included in the proposed permit were adopted based on information from the upstream Deer Creek Wastewater Treatment Plant. The conclusions of the site-specific study were that cold-water fish were incidental to upstream waters. The technical reports further stated that if cold-water fish species were found to be present, the site-specific temperature limitations should be revisited. Fall run salmon are present in the lower reaches of Deer Creek at the confluence of the Cosumnes River, downstream of the discharge. The temperatures in the site-specific objective are not protective of cold water fish species. The wastewater discharge has violated the previous NPDES permit limitations for temperature, as documented in the Fact Sheet, Section D.

Temperature is a pollutant. The discharge has exceeded the temperature limitation in the existing NPDES permit. There is a reasonable potential for the discharge to exceed the proposed Permit Receiving Water Limitations for temperature. The proposed Permit does not include an Effluent Limitation for temperature. The California Water Code (CWC), Section 13377 states in part that: "...the state board or the regional boards shall...issue waste discharge requirements...which apply and ensure compliance with ...water quality control plans, or for the protection of beneficial uses..." Section 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR §122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter. Failure to include an effluent limitation for temperature the proposed permit violates 40 CFR 122.44 and CWC 13377.

6. The Discharger does not provide best available technology (BAT) and best practicable treatment and control (BPTC) of the discharge as required by the Clean Water Act, Federal Regulations and the California Water Code by failing to adequately treat volatile organic compounds.

The Discharger is only required to treat volatile organic compounds (VOCs) to non-detectable levels based on a monthly average. There are treatment technologies readily available that treat VOCs to non-detectable concentrations on an instantaneous maximum basis. Treatment of VOCs to meet a monthly average means that there may VOCs present on the discharge in any single sample and still meet the monthly average limitation. The presence of VOCs on a daily basis presents a reasonable potential to

exceed water quality criteria and standards in violation of Federal Regulations, 40 CFR 122.44.

The ultimate goal of the Federal Clean Water Act as expressed in Section 101 is the elimination of the discharge of pollutants into navigable waters by 1985. The Act throughout, places an emphasis on the control and reduction of the discharge of pollutants by point sources as interim goals. Technology based effluent limitations are required by Section 301 of the Act for all point sources. A standard of “best available technology” (BPT) is required by 1977, and a more stringent standard of “best available technology” (BAT) is required by 1983 for industrial point sources. For publicly owned treatment works (POTWs), secondary treatment is required by 1977 and “best practicable treatment” (BPT) by 1983. Best practicable treatment and control (BPTC) is also required by the State and Regional Board’s Antidegradation Policy (Resolution 68-16). An antidegradation policy analysis was not conducted regarding the presence of VOCs in the discharge and hence the receiving stream. The Discharger must be required to provide BAT and BPTC and meet non-detectable concentration based limitations on an instantaneous maximum basis.

7. The proposed permit contains an inadequate reasonable potential by using incorrect statistical multipliers in violation of Federal Regulations.

Federal regulations, 40 CFR § 122.44(d)(1)(ii), state “when determining whether a discharge causes, has the reasonable potential to cause, or contributes to an in-stream excursion above a narrative or numeric criteria within a State water quality standard, the permitting authority shall use procedures which account for existing controls on point and nonpoint sources of pollution, **the variability of the pollutant or pollutant parameter in the effluent**, the sensitivity of the species to toxicity testing (when evaluating whole effluent toxicity), and where appropriate, the dilution of the effluent in the receiving water.” Emphasis added. The proposed Permit, Fact Sheet, page F-16 Section c, clearly states that the SIP procedures, which do not account for statistical variability, were used to calculate reasonable potential, in direct violation of the cited Federal Regulation. Attachment G: The reasonable potential analyses fails to consider the statistical variability of data and laboratory analyses as explicitly required by the federal regulations. The procedures for computing variability are detailed in Chapter 3, pages 52-55, of USEPA’s *Technical Support Document For Water Quality-based Toxics Control*. The reasonable potential analyses are flawed and must be recalculated. The Regional Board has an obligation to consider statistical variability in compliance with federal regulations.

8. The proposed Permit reduces acute toxicity testing based on an incomplete record and despite clear instances of toxicity.

The proposed Permit based a reduction in acute toxicity testing on an incomplete record of the discharge quality. The discussion of acute toxicity testing only discusses data from February 2002 through August 2005. There is a disturbing absence of data from 2001, half of 2005 and all of 2006. The absence of data is contrary to the SIP,

Section 1.2, requirement that the Regional Board use all valid, relevant and representative data. There does not appear to have been any changes in the treatment processes or the quality of the influent which would invalidate this data.

Even still, the Regional Board states that 45 of the 49 acute toxicity tests had greater than or equal to 90 % survival of the test species. Since the receiving stream is classified as ephemeral by the proposed Permit; 90% survival correlates to 10% mortality in the receiving stream. The Regional Board does not discuss the 4 of 49 toxicity tests (8 percent) that were less than 90 % survival. The reduction of monitoring for toxicity when the Discharger has caused greater than 10% mortality in the receiving stream more than 8% of the time is appalling and is contrary to the Federal Regulation 40 CFR 122.41(j)(1) which requires that samples taken for the purpose of monitoring shall be representative.

Thank you for considering these comments. If you have questions or require clarification, please don't hesitate to contact us.

Sincerely,

A handwritten signature in black ink, appearing to read "Bill Jennings". The signature is fluid and cursive, with the first name "Bill" and last name "Jennings" clearly distinguishable.

Bill Jennings, Executive Director
California Sportfishing Protection Alliance